

## Claims

1. An X-ray apparatus, in particular a mammographic X-ray apparatus, having an X-ray beam (11.1) that is generated by an X-ray source (5.1) and can be delimited by a diaphragm (4.1) for making X-ray images of a patient, and having an illuminating beam (7.1), generated by indicator means in the form of LEDs (6), for illuminating a corresponding X-ray field on the surface of the patient, characterized in that

- the LEDs (6) are disposed between the X-ray source (5.1) and the diaphragm (4.1), and the illuminating beam (7.1) of the LEDs (6) is aimed in an undeflected fashion at the X-ray field;

- the LEDs (6) are disposed outside the X-ray beam (11.1), distributed over its outer circumference.

2. An X-ray apparatus, in particular a mammographic X-ray apparatus, having an X-ray beam (11.2) that is generated by an X-ray source (5.2) and can be delimited by a diaphragm (4.2) for making X-ray images of a patient, and having an illuminating beam (7.2), generated by indicator means in the form of LEDs (6.2), for illuminating a corresponding X-ray field on the surface of the patient, characterized in that

- at least one LED (6.2) is disposed between the X-ray source (5.2) and the diaphragm (4.2), and the illuminating beam (7.2) of the LED (6.2) is aimed in an undeflected fashion at the X-ray field;

- the at least one LED (6.2) is pivotable out of the X-ray beam (11.2).

3. The X-ray apparatus as defined by claim 1, characterized in that the LEDs (6) are disposed on a common ring mount (10).

4. The X-ray apparatus as defined by claim 2, having a filter array (3) between the X-ray source (5.2) and the diaphragm (4.2), characterized in that the at least one LED (6.2) is mounted on the filter array (3).

5. The X-ray apparatus as defined by claim 4, characterized in that the at least one LED (6.2) is positionable in the filter array (3), in particular in place of a filter (8.1; 8.2; 8.3) and is pivotable out of the X-ray beam (11.2).

6. The X-ray apparatus as defined by claim 5, characterized in that the at least one LED (6.2) is pivotable out of the X-ray beam (11.2) by rotation of the filter array (3) about its longitudinal axis.